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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/622,042

07/17/2003

Bo Su Chen

15436.441.7

2261

22913 7590 03/05/2007

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(F/K/A WORKMAN NYDEGGER & SEELEY)  
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EXAMINER

ROJAS, OMAR R

ART UNIT

PAPER NUMBER

2874

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/622,042

Applicant(s)

CHEN ET AL.

Examiner

Omar Rojas

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2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)                |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application      |
| Paper No(s)/Mail Date _____  | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

### **DETAILED ACTION**

The finality of the previous Office action mailed August 29, 2006 is hereby withdrawn.

#### ***Response to Amendment***

1. With regards to the amendment filed on January 15, 2007, all the requested changes to the claims have been entered. Claims 1-16 and 18-42 are pending.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-16 and 18-42 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-16 and 18-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent No. US 6,909,554 B2 to Liu et al. ("Liu").**
5. Applicant has provided evidence in this file showing that the invention was owned by, or subject to an obligation of assignment to, the same entity as the Liu patent at the time this invention was made, or was subject to a joint research agreement at the time this invention was made. However, the Liu patent additionally qualifies as prior art under another subsection of 35 U.S.C. 102, and therefore, is not disqualified as prior art under 35 U.S.C. 103(c).

Applicant may overcome the applied art either by a showing under 37 CFR 1.132 that the invention disclosed therein was derived from the invention of this application, and is therefore, not the invention "by another," or by antedating the applied art under 37 CFR 1.131.

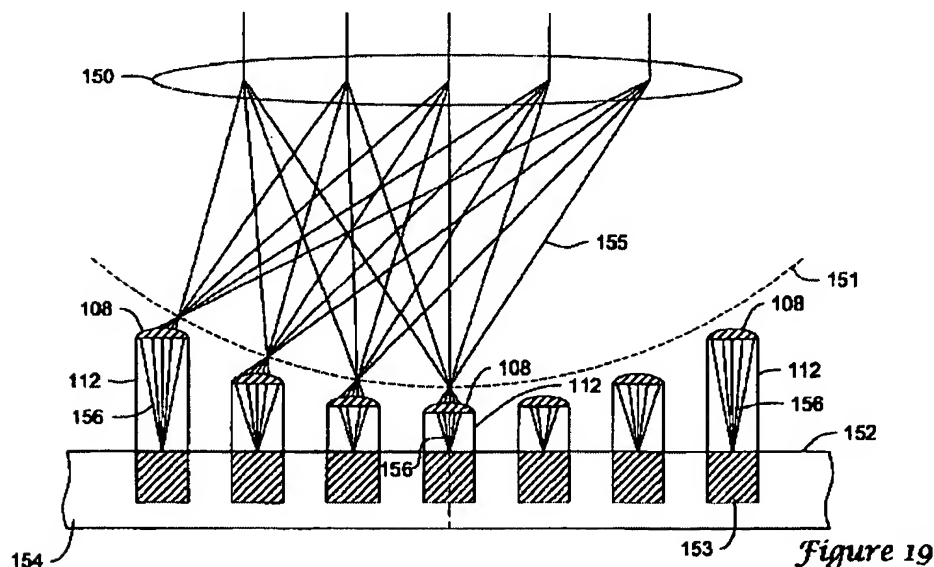
*In re* claims 1, 13, 27, and 37, Liu discloses an optical coupling system (e.g., Figures 19-20) comprising:

a substrate 154 having a plurality of optoelectronic elements 153 formed on said substrate;

a plurality of posts 112 formed over the plurality of optoelectronic elements 153 on said substrate wherein each post has a height of between about 30 microns and about 250 microns (see Fig. 11a; col. 12, lines 24-34; and col. 13, lines 8-10) ;

a plurality of microlenses 108 with each lens 108 formed on a first end of said posts 112, wherein the microlenses have a diameter of between 20 and 60 microns (col. 13, lines 8-10);

a fore optic/window/substrate 150 having a first side proximate to said plurality of microlenses and having a second side. Figure 19 of Liu is reproduced below.



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*In re* claim 2, the particular limitations are shown in Figure 19 of Liu.

*In re* claims 3, 8, 14, 15, 18, 19, 29, 30, 32-34, and 39-41, the particular limitations are disclosed by Liu at column 7, lines 59-62 and column 15, lines 7-9.

*In re* claims 4, 16, 31, 35, and 38, the particular limitations are disclosed by Liu at column 8, lines 1-4, and column 13, lines 33-65.

*In re* claim 9, the particular limitations are disclosed by Liu in the paragraph bridging column 13 to column 14.

*In re* claims 10-12, 22-24, and 28, the particular limitations are disclosed by Liu at column 8, lines 12-28 and column 13, lines 5-32.

Thus, Liu only differs from claims 1-4, 8-16, 18, 19, 22-24, 27-35, and 37-41, in that Liu does not mention that the fore optic/window/substrate 150 is made of glass. Liu does mention that the fore optic 150 may comprise a lens (column 1, lines 63-65). Glass lenses are well-known in the art. It would have been obviously expedient to use glass in the fore optic 150 of Liu in order to provide an operable lens. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 1-4, 8-16, 18, 19, 22-24, 27-35, and 37-41 in view of Liu.

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*In re* claims 5, 18, 36, and 42, the previous remarks concerning Liu are incorporated herein. Liu further differs from claims 5, 18, 36, and 42 in that Liu does not specifically mention using single mode optical fiber. Single mode optical fibers are well known in the art and would be considered a conventional type of optical fiber. Since Liu mentions using an optical fiber, it would have been obviously expedient to use single mode fiber in order to provide an operable optical fiber. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 5, 18, 36, and 42 in view of Liu.

*In re* claims 6, 7, 20, and 21, the previous remarks concerning Liu are incorporated herein. Liu further differs from claims 6, 7, 20, and 21, in that Liu does not specifically mention whether the optical fiber is placed at a distance or in contact with a surface of the fore optic/window 150. However, these are the only two possible alternative for locating the optical with respect to the fore optic 150. Either the optical fiber contacts the fore optic or it doesn't. Both arrangements are well known in the art. For example, the fore optic 150 of Liu could be part of a lensed optical fiber. Such an alternative would be obviously expedient in order to optimize coupling efficiency of light into optical fiber. On the other hand, spacing the fore optic from the optical fiber would be desirable in Liu in order to allow easy replacement of a damaged optical fiber. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 6, 7, 20, and 21 in view of Liu.

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*In re* claims 25 and 26, the previous remarks concerning Liu are incorporated herein. Liu further differs from claims 25 and 26 in that Liu does not suggest using a fore optic/window 150 having a thickness of about 300 microns. Changes in size have been held obvious as a matter of law.

*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). The device of Liu would appear to work just as well using a fore optic 150 having a diameter or thickness of about 300 microns, especially since Liu does not limit his fore optic to any particular size of thickness. Furthermore, the applicant has not set forth a perceived criticality for using a thickness of 300 microns. Thus, using a fore optic having a thickness of about 300 microns is considered obvious in view of Liu as a matter of design choice. Therefore, it would have also been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 25 and 26 in view of Liu.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (12:00PM-8:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Omar Rojas  
Patent Examiner  
Art Unit 2874

or  
February 22, 2007



Rodney Bovernick  
Supervisory Patent Examiner  
Technology Center 2800